

#3661 FRAGMENTED INSULIN-LIKE GROWTH FACTOR BINDING PROTEIN TYPE-3 IS INVERSELY ASSOCIATED WITH BREAST CANCER RISK.

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We previously demonstrated that nipple aspirate fluid (NAF) can be obtained from virtually all women between the ages of 30 and 80, and that the level in NAF of insulin-like growth factor (IGF) binding protein type-3 (IGFBP-3), the most prevalent binding protein of IGF-1 and IGF-2, is directly associated with breast cancer risk. Fragments of IGFBP-3 (BP3-FR) have been found in a variety of body fluids from normal subjects, including lymph, serum and seminal plasma. IGFBP-3 fragments have been found to inhibit the mitogenic effects of IGF-1. The objectives of this report were to determine if 1) BP3-FR could be measured in NAF, and 2) levels were associated with breast cancer risk. Thirty-seven subjects provided specimens. BP3-FR was measurable in all subjects, with values ranging from 2-183 ng/mg. Levels of BP3-FR ($p=0.0092$) were lower in women with *in situ* or invasive breast cancer than in those without. In summary, BP3-FR is measurable in breast aspirate fluid and the levels are inversely associated with breast cancer, suggesting that this marker may be useful for risk evaluation.